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REMARKS

The foregoing amendments and the following remarks are responsive to the September 9, 2005 Office Action. Claims 1, 6, 7, 13, 21, 27, and 34 are amended, Claims 4, 19, and 20 are cancelled without prejudice, Claims 2-3, 5, 8-12, 14-18, 22-26, 28-33, and 35-38 remain as originally filed, and Claims 39 and 40 are new. New Claims 39 and 40 find support in originally filed Claims 1, 4, and 6, as well as various portions of the specification, and do not represent new matter. Thus, Claims 1-3, 5-18, and 21-40 are presented for further consideration. Please enter the amendments and reconsider the claims in view of the following remarks.

Response to Objections to Claims 4, 6, 13, 21, and 27

Applicants gratefully acknowledge the Examiner's statement that Claims 4 and 6 would be allowable if written to overcome the rejections under 35 U.S.C. §112, second paragraph, and to include all the limitations of the base claim. Applicants have added new Claims 39 and 40 which correspond to original Claims 4 and 6, respectively, written as apparatus claims and which include all the limitations of original Claim 1. Accordingly, Applicants submit that Claims 39 and 40 are in condition for allowance and request the Examiner to pass these claims to allowance.

Applicants further gratefully acknowledge the Examiner's statement that Claims 13, 21, and 27 would be allowable if written in independent form including all the limitations of the base claim. Applicants have amended these claims to be written in independent form and include all the limitations of the base claims. Accordingly, Applicants submit that amended Claims 13, 21, and 27 are now in condition for allowance and request the Examiner to pass these claims to allowance.

Response to Rejection of Claims 1-6, 10-12, 19-20, 28-33, and 37-38 Under 35 U.S.C. § 112, Second Paragraph

In the September 9, 2005 Office Action, the Examiner rejected Claims 1-6, 10-12, 19-20, 28-33, and 37-38 under 35 U.S.C. § 112, second paragraph, as being indefinite for failure to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 1-6

The Examiner states that Claim 1 is directed to a method of stabilizing the mean wavelength of light generated by a SFS source, but includes limitations directed to an SFS and therefore crosses two statutory classes of invention. Applicants respectfully traverse this argument.

As currently amended, Claim 1 recites (emphasis added):

1. A method of stabilizing the mean wavelength of light generated by a superfluorescent fiber source (SFS), the method comprising:

providing the SFS, the SFS comprising:

an Er-doped fiber (EDF) having a first end, a second end, and a length between the first end and the second end;

a coupler optically coupled to the first end of the EDF;

a pump source optically coupled to the coupler, the pump source producing pump light, the mean wavelength influenced by a wavelength of the pump light, the wavelength of the pump light dependent on the temperature of the pump source and dependent on the power of the pump light, the pump light propagating to the EDF via the coupler, whereby the EDF responds to the pump light by producing forward amplified spontaneous emission (ASE) light propagating away from the pump source and backward ASE light propagating towards the pump source;

a mirror optically coupled to the coupler, whereby the mirror reflects the backward ASE light as reflected ASE light, which propagates to the EDF, the reflected ASE light amplified upon traveling through the EDF, the forward ASE light and the amplified reflected ASE light propagating out of the second end of the EDF; and

an optical isolator coupled to the second end of the EDF, the forward ASE light and the amplified reflected ASE light from the second end of the EDF being transmitted through the optical isolator as the SFS output light;

optimizing the length of the EDF, wherein the optimizing the length of the EDF comprises selecting the length to compromise between reduction of the dependence of the mean wavelength on the pump light power and reduction of the contribution of the forward ASE light to the output light; and

reducing the influence of the pump light wavelength on the stability of the mean wavelength.

Applicants submit that while Claim 1 does describe the properties of an SFS suitable for use with this method, Claim 1 is clearly directed to a method of stabilizing SFS light generated by the SFS. The method recited by Claim 1 comprises providing an SFS having an EDF,

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optimizing the length of the EDF, and reducing the influence of the pump wavelength on the stability of the mean wavelength. Therefore, Applicants submit that Claim 1 satisfies the requirement of §112, second paragraph, by distinctly claiming the subject matter Applicants regard as the invention. Each of Claims 2-6 depend directly from Claim 1, therefore, Applicants submit that Claims 2-6 likewise distinctly claim the subject matter Applicants regard as the invention. Accordingly, Applicants request that the Examiner withdraw the rejection of Claims 1-6 and pass these claims into allowance.

Claims 10-12, 19-20, 28-33, and 37-38

The Examiner further notes that Claims 10, 11, 19-20, 28-33, and 37-38 include the term “+0.5 part per million” (“+0.5ppm”). The Examiner further notes that it is not possible to ascertain a range without a starting point and moreover that if the range is 0+0.5ppm it is unclear how -0.5ppm could be possible. Applicants respectfully traverse this argument.

Applicants submit that persons skilled in the art understand that stability of the mean wavelength can be expressed as the deviation of the mean wavelength from its average value during a specified time period. Persons skilled in the art would understand that a statement that the stability of the mean wavelength is “within approximately ± 0.5 part per million” over a specified time period (e.g., a period of time of at least one hour as recited by Claim 10) means that the mean wavelength remains within the range between approximately $\lambda_{\text{avg}} \times (1 - (0.5 \times 10^{-6}))$ to approximately $\lambda_{\text{avg}} \times (1 + (0.5 \times 10^{-6}))$ over the specified time period, where λ_{avg} is the average of the mean wavelength over the specified time period. Therefore, a stability expressed as being “within approximately ± 0.5 part per million” is not indefinite. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claims 10, 11, 28-33 and 37-38 and pass these claims into allowance.

Applicants have cancelled Claim 19 and 20 without prejudice. With regard to Claim 12, Applicants submit that Claim 12 does not include the language objected to by the Examiner as being indefinite. If there is some other reason for the Examiner rejecting Claim 12 for being indefinite, Applicants respectfully request clarification by the Examiner. Absent any other reasons for indefiniteness, Applicants respectfully request that the Examiner withdraw the rejection of Claim 12 and pass Claim 12 to allowance.

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Response to Rejection of Claims 1-3, 7-9, 12, 16, and 34-36 Under 35 U.S.C. § 102(b)

In the September 9, 2005 Office Action, the Examiner rejected Claims 1-3, 7-9, 12, 16, and 34-36 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,177,562, issued to Wysocki et al. ("Wysocki").

Claims 1-3

As currently amended, Claim 1 recites (emphasis added):

1. A method of stabilizing the mean wavelength of light generated by a superfluorescent fiber source (SFS), the method comprising:
 - providing the SFS, the SFS comprising:
 - an Er-doped fiber (EDF) having a first end, a second end, and a length between the first end and the second end;
 - a coupler optically coupled to the first end of the EDF;
 - a pump source optically coupled to the coupler, the pump source producing pump light, the mean wavelength influenced by a wavelength of the pump light, the wavelength of the pump light dependent on the temperature of the pump source and dependent on the power of the pump light, the pump light propagating to the EDF via the coupler, whereby the EDF responds to the pump light by producing forward amplified spontaneous emission (ASE) light propagating away from the pump source and backward ASE light propagating towards the pump source;
 - a mirror optically coupled to the coupler, whereby the mirror reflects the backward ASE light as reflected ASE light, which propagates to the EDF, the reflected ASE light amplified upon traveling through the EDF, the forward ASE light and the amplified reflected ASE light propagating out of the second end of the EDF; and
 - an optical isolator coupled to the second end of the EDF, the forward ASE light and the amplified reflected ASE light from the second end of the EDF being transmitted through the optical isolator as the SFS output light;
 - optimizing the length of the EDF, wherein the optimizing the length of the EDF comprises selecting the length to compromise between reduction of the dependence of the mean wavelength on the pump light power and reduction of the contribution of the forward ASE light to the output light; and**
 - reducing the influence of the pump light wavelength on the stability of the mean wavelength.

Applicants submit that Wysocki does not disclose all the limitations recited by amended Claim 1. For example, Applicants submit that Wysocki does not disclose "optimizing the length of the EDF" which comprises "selecting the length to compromise between reduction of the

dependence of the mean wavelength on the pump light power and reduction of the contribution of the forward ASE light to the output light,” as recited by amended Claim 1.

Wysocki discloses that the spectral properties of the output signal are substantially altered for greater lengths of optical fibers. Wysocki further discloses using a fiber length longer than the optimal length for generating forward signal power for all pump power levels in order to (1) produce signal absorption which reduces round trip gain, (2) to guarantee the absorption of more than 99% of the pump power across the pump band from 955 nm to 995 nm; and (3) to reduce the forward signal. (Wysocki, Col. 12: Lns. 46-60). Thus, while Wysocki does disclose increasing the length of optical fibers in part to reduce the forward signal, Wysocki does not disclose optimizing the fiber length by selecting a fiber length “to compromise between reduction of the dependence of the mean wavelength on the pump light power and reduction of the contribution of the forward ASE light to the output light,” as recited by amended Claim 1.

Therefore, Applicants submit that amended Claim 1 is not anticipated by Wysocki. Applicants respectfully request the Examiner to withdraw the rejection of amended Claim 1. Each of Claims 2 and 3 depends directly from amended Claim 1, and therefore, is patentable for at least the same reasons that amended Claim 1 is patentable over the applied art. Accordingly, allowance of Claims 1-3 is respectfully requested.

Claims 7-9, 12, and 16

As currently amended, Claim 7 recites (emphasis added):

7. A superfluorescent fiber source (SFS) to generate output light having a mean wavelength with a selected stability, the SFS comprising:
 - an Er-doped fiber (EDF) having a first end, a second end, and a length between the first end and the second end;
 - a coupler optically coupled to the first end of the EDF;
 - a pump source optically coupled to the coupler, the pump source producing pump light, the mean wavelength of the output light influenced by a wavelength of the pump light, the wavelength of the pump light dependent on the temperature of the pump source and dependent on the power of the pump light, the pump light propagating to the EDF via the coupler, whereby the EDF responds to the pump light by producing forward amplified spontaneous emission (ASE) light propagating away from the pump source and backward ASE light propagating through the first end of the EDF and through the coupler;
 - a mirror optically coupled to the coupler, whereby the mirror reflects the backward ASE light as reflected ASE light, propagating through the coupler, the reflected ASE light amplified upon traveling

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through the EDF, the forward ASE light and the amplified reflected ASE light propagating out of the second end of the EDF; and

an optical isolator coupled to the second end of the EDF, the forward ASE light and the amplified reflected ASE light from the second end of the EDF being transmitted through the optical isolator as the output light, **wherein the length of the EDF is optimized to compromise between reduction of dependence of the mean wavelength on the pump light power and reduction of the contribution of the forward ASE light to the output light.**

For reasons similar to those discussed above with regard to amended Claim 1, Applicants submit that Wysocki does not disclose all the limitations recited by amended Claim 7. Therefore, Applicants submit that amended Claim 7 is not anticipated by Wysocki. Applicants respectfully request the Examiner to withdraw the rejection of amended Claim 7. Each of Claims 8-9, 12, and 16 depends directly from amended Claim 7, and therefore, is patentable for at least the same reasons that amended Claim 7 is patentable over the applied art. Accordingly, allowance of Claims 7-9, 12 and 16 is respectfully requested.

Claims 34-36

As currently amended, Claim 34 recites (emphasis added):

34. A superfluorescent fiber source (SFS) that generates output light having a mean wavelength with a selected stability, the SFS comprising:

an erbium-doped fiber (EDF) having a length disposed between a first end and a second end, a temperature;

a pump source controlled to produce pump light at a substantially constant pump wavelength, the mean wavelength of the SFS influenced by the pump wavelength, the pump wavelength dependent on the temperature of the pump source and dependent on the power of the pump light, the pump light coupled to the first end of the EDF to propagate toward the second end of the EDF, the EDF responsive to the pump light to produce forward amplified spontaneous emission (ASE) light that propagates toward the second end of the EDF and is output from the second end of the EDF, the EDF further responsive to the pump light to produce backward ASE light that propagates toward the first end of the EDF, the backward ASE light having a first polarization; and

a mirror optically coupled to receive the backward ASE light, the mirror reflecting the backward ASE light to produce reflected ASE light at a second polarization orthogonal to the first polarization, the reflected ASE light coupled to the first end of the EDF and amplified upon propagating through the length of the EDF to the second end of the EDF where the amplified reflected ASE light is output with the forward ASE light, **whereby the stability of the mean wavelength is selected by**

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optimizing the length of the EDF to compromise between reduction of dependence of the mean wavelength on the pump light power and reduction of the contribution of the forward ASE light to the output light and reducing the influence of the pump wavelength on the mean wavelength.

For reasons similar to those discussed above with regard to amended Claim 1, Applicants submit that Wysocki does not disclose all the limitations recited by amended Claim 34. Therefore, Applicants submit that amended Claim 34 is not anticipated by Wysocki. Applicants respectfully request the Examiner to withdraw the rejection of amended Claim 34. Each of Claims 35 and 36 depends directly from amended Claim 34, and therefore, is patentable for at least the same reasons that amended Claim 34 is patentable over the applied art. Accordingly, allowance of Claims 34-36 is respectfully requested.

Response to Rejection of Claims 17-18, 22-23, and 25-26 Under 35 U.S.C. § 102(b)

In the September 9, 2005 Office Action, the Examiner rejected Claims 17-18, 22-23, and 25-26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,313,480, issued to Fidric et al. ("Fidric").

Claim 17

As originally filed, Claim 17 recites (emphasis added):

17. A method of determining an estimated mean wavelength of a superfluorescent fiber source (SFS), the method comprising:
providing an SFS having an actual mean wavelength, the SFS comprising an erbium-doped fiber (EDF) having a temperature and a pump source;
configuring the SFS such that the actual mean wavelength has a dependence on the temperature of the EDF;
obtaining the dependence of the actual mean wavelength on the temperature of the EDF;
measuring the temperature of the EDF; and
calculating the estimated mean wavelength using the measured temperature of the EDF and the dependence of the actual mean wavelength on the temperature of the EDF.

Applicants submit that Fidric does not disclose or suggest all the limitations recited by Claim 17. For example, Applicants submit that Fidric does not disclose or suggest "calculating the estimated mean wavelength using the measured temperature of the EDF and the dependence of the actual mean wavelength on the temperature of the EDF," as recited by Claim 17.

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Fidric discloses that variations in the SFS emission ray wavelength can be described as being the sum of three contributions: (1) the partial derivative of the wavelength with respect to the pump power times an incremental change in pump power, (2) the partial derivative of the wavelength with respect to the pump wavelength times an incremental change in pump wavelength, and (3) the partial derivative of the wavelength with respect to the temperature of the SFS source times an incremental change in SFS temperature. (Fidric, Col 8: Lns 53-63). Fidric also discloses modeling the temperature-dependent contribution to the variations using the measured temperature of the system and a table of information characterizing the dependent relationship of the SFS wavelength with the SFS temperature. (Fidric, Col 9: Lns 7- 20).

Applicants submit that Fidric merely discloses calculating the variations of the wavelength using the measured temperature, not calculating the estimated mean wavelength as recited by Claim 17. Fidric discloses decreasing the variations of the wavelength by using the measured temperature of the fiber to “calculate[] the compensation required to cancel the effect of the third term in Equation 1.” (Fidric, Col. 9: lns. 47-53). Thus, Fidric only calculates variations of the wavelength due to temperature variations, and does not calculate the wavelength itself. Therefore, Applicants submit that Fidric does not disclose or suggest “calculating the estimated mean wavelength using the measured temperature of the EDF and the dependence of the actual mean wavelength on the temperature of the EDF” as recited by Claim 17.

Applicants submit that Claim 17 is patentably distinguished over Fidric. Each of Claims 18, 22-23, and 25-26 depends directly from Claim 17 and, therefore, is patentable for at least the same reasons that Claim 17 is patentable over the applied art. Accordingly, allowance of Claims 17-18, 22-23, and 25-26 is respectfully requested.

Response to Rejection of Claim 5 Under 35 U.S.C. § 103(a)

In the September 9, 2005 Office Action, the Examiner rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Wysocki in view of Fidric. As discussed above, Applicants submit that amended Claim 1 is patentably distinguishable over Wysocki. Applicants further submit that Fidric does not disclose or suggest the limitations of amended Claim 1 which are not disclosed or suggested by Wysocki. Therefore, amended Claim 1 is patentably distinguished over the combination of Wysocki and Fidric. Claim 5 depends directly from amended Claim 1.

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Therefore, Applicants submit that Claim 5 is patentable over Wysocki in view of Fidric. Accordingly, allowance of Claim 5 is respectfully requested.

Response to Rejection of Claims 10-11, 28-32, and 37-38 Under 35 U.S.C. § 103(a)

In the September 9, 2005 Office Action, the Examiner rejected Claims 10-11, 28-32, and 37-38 under 35 U.S.C. § 103(a) as being unpatentable over Wysocki in view of U.S. Patent No. 6,144,788, issued to Ang et al. ("Ang") and further in view of U.S. Patent No. 5,875,203, issued to Wagener et al. ("Wagener").

Claims 10-11 and 37-38

As discussed above, Applicants submit that amended Claims 7 and 34 are patentably distinguishable over Wysocki. Applicants further submit that Ang and Wagener do not disclose or suggest the limitations of amended Claims 7 and 34 which are not disclosed or suggested by Wysocki. Therefore, amended Claims 7 and 34 are patentably distinguished over the combination of Wysocki, Ang, and Wagener.

Each of Claims 10-11 depends directly from amended Claim 7 and each of Claims 37-38 depends directly from amended Claim 34. Therefore, Applicants submit that Claims 10-11 and 37-38 are patentable over Wysocki in view of Ang in further view of Wagener for at least the same reasons amended Claims 7 and 34 are patentable over the applied art. Accordingly, allowance of Claims 10-11 and 37-38 is respectfully requested.

Claims 28-32

As originally filed, Claim 28 recites:

28. A superfluorescent fiber source (SFS) having a mean wavelength which is stable to within approximately ± 0.5 part per million over a period of time of at least one hour.

The Examiner states that Wysocki discloses "everything except to specifically indicate the stability wavelength value during a specific period of time." The Examiner further states that Ang discloses the wavelength stability is 2 ppm for a period of 78 hours while Wagener teaches an improvement in mean wavelength stability by an order of magnitude or more over previously existing sources. The Examiner further states that based on these two references, it would have been obvious to realize that one can achieve an approximate stability of ± 0.5 ppm over a period of at least one hour. Applicants respectfully traverse this argument.

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Applicants submit that the prior art does not provide a motivation or teaching to combine Ang and Wagener. In the Ang patent cited by the Examiner, which was filed in June 1998, Ang discloses a wavelength stability of 2 ppm for a period of 78 hours. (Ang, Fig. 12, Col. 6: Lns 19-23). However, in the Wagener patent cited by the Examiner, which was filed in December 1996, Wagener teaches that “the stability of the mean wavelength for the output signal can be significantly improved (e.g., on the order of ten times the stability of previous sources).” (Wagener, Col. 4: Lns. 46-49). Applicants submit that there is no motivation to combine Wagner with Ang to achieve a stability “within approximately ± 0.5 part per million over a period of time of at least one hour,” as recited by Claim 28, because Wagener was comparing its improved stability to the prior art levels of stability achievable in 1996 and Ang did not disclose its level of 2 ppm stability over a period of 78 hours until June 1998. Therefore, Wagener’s statements regarding improvements over prior art levels cannot be applied to the subsequent state of the art disclosed by Ang.

Furthermore, since Ang’s high stability light source was disclosed after Wagener, there is no evidence that Wagener’s methods for achieving an order of magnitude improvement in stability would actually generate an equivalent improvement in the stability of Ang’s light source. Therefore, Applicants submit that the teachings of Wagener and Ang may not be combined in order to conclude that it would have been obvious to achieve a stability of ± 0.5 ppm over a period of at least one hour as disclosed by Claim 28.

Applicants further submit that the disclosure of Wagener is silent regarding measurements of stability of the mean wavelength over a period of time as disclosed by Ang and recited in Claim 28. Wagener discloses measuring the stability of the mean wavelength as specific operating parameters are controllably varied. For example, with reference to Figs. 4a and 4b and 5a and 5b, Wagener discloses achieving approximately a 9X improvement in the stability of the mean wavelength as pump power is controllably varied or alternately approximately a 3X improvement in the stability of the mean wavelength as pump wavelength is controllably varied. (Wagener, Figs. 4a, 4b, 5a, and 5b and Col. 8: Lns. 9-22, Col. 8: Ln. 55 - Col. 9: Ln.15). However, in an actual system, the multiple operating parameters (including pump wavelength, pump power and temperature) all vary over time to different extents, thereby affecting the overall stability of the mean wavelength as a function of time. Wagener does not

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disclose how these parameters vary over time or that the contributions from variations of the specific operating parameters can be combined to achieve an overall system “having a mean wavelength which is stable to within approximately ± 0.5 part per million over a period of time of at least one hour,” as recited by Claim 28. Therefore, Wagener does not disclose or suggest the limitations of Claim 28 which are not disclosed or suggested by Wysocki and Ang.

Applicants submit that Claim 28 is patentably distinguished over the combination of Wysocki, Ang, and Wagener and respectfully request the Examiner to withdraw the rejection of Claim 28. Each of Claims 29-32 depends directly from Claim 28. Therefore, Applicants submit that Claims 29-32 are likewise patentable over the combination of Wysocki, Ang, and Wagener. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claims 28-32 and pass these claims to allowance.

Response to Rejection of Claim 14 Under 35 U.S.C. § 103(a)

In the September 9, 2005 Office Action, the Examiner rejected Claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Wysocki in view of U.S. Patent No. 6,429,965, issued to Falquier et al. (“Falquier”). As discussed above in regard to amended Claim 7, Applicants submit that amended Claim 7 is patentably distinguishable over Wysocki. Applicants further submit that Falquier does not disclose or suggest the limitations of amended Claim 7 which are not disclosed or suggested by Wysocki. Therefore, amended Claim 7 is patentably distinguished over the combination of Wysocki and Falquier. Claim 14 depends directly from amended Claim 7. Therefore, Applicants submit that Claim 14 is patentable over Wysocki in view Falquier for at least the same reasons that amended Claim 7 is patentable over this combination. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claim 14 and pass this claim to allowance.

Response to Rejection of Claim 15 Under 35 U.S.C. § 103(a)

In the September 9, 2005 Office Action, the Examiner rejected Claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Wysocki in view of Falquier, and further in view of U.S. Patent No. 6,404,950, issued to Tsukitani et al. (“Tsukitani”). As discussed above in regard to amended Claim 7, Applicants submit that amended Claim 7 is patentably distinguishable over Wysocki. Applicants further submit Falquier and Tsukitani do not disclose or suggest the limitations of amended Claim 7 which are not disclosed or suggested by Wysocki and that

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Falquier and Tsukitani do not provide a motivation to combine these references. Therefore, amended Claim 7 is patentably distinguished over the combination of Wysocki, Falquier, and Tsukitani. Claim 15 depends directly from amended Claim 7. Therefore, Applicants submit that Claim 15 is patentable over Wysocki in view of Falquier and further in view of Tsukitani for at least the same reasons that amended Claim 7 is patentable over the combination. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claim 15 and pass this claim to allowance.

Response to Rejection of Claim 33 Under 35 U.S.C. § 103(a)

In the September 9, 2005 Office Action, the Examiner rejected Claim 33 under 35 U.S.C. § 103(a) as being unpatentable over Wysocki in view of Ang and further in view Wagener and further in view of Falquier. As discussed above in regard to Claim 28, Applicants submit that Claim 28 is patentably distinguishable over the combination of Wysocki, Ang, and Wagener. Applicants further submit Falquier does not disclose or suggest the limitations of Claim 28 which are not disclosed or suggested by the combination of Wysocki, Ang, and Wagener. Therefore, Applicants submit that Claim 28 is patentably distinguished over the combination of Wysocki, Ang, Wagener, and Falquier. Claim 33 depend directly from Claim 28. Therefore, Applicants submit that Claim 33 is patentable over the combination of Wysocki, Ang, Wagener, and Falquier for at least the same reasons as Claim 28 is patentable over the combination.

Accordingly, Applicants respectfully request the Examiner to withdraw this rejection and pass Claim 33 to allowance.

Response to Rejection of Claims 19 and 20 Under 35 U.S.C. § 103(a)

In the September 9, 2005 Office Action, the Examiner rejected Claims 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Fidric in view of Ang and further in view of Wagener. Applicants have cancelled Claims 19 and 20 without prejudice.

Response to Rejection of Claim 24 Under 35 U.S.C. § 103(a)

In the September 9, 2005 Office Action, the Examiner rejected Claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Fidric in view of Falquier. As discussed above in regard to Claim 17, Applicants submit that Claim 17 is patentably distinguishable over Fidric. Applicants further submit that Falquier does not disclose or suggest the limitations of Claim 17 which are not disclosed or suggested by Fidric.

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Therefore, Claim 17 is patentably distinguished over Fidric in view of Falquier. Claim 24 depends directly from Claim 17. Therefore, Applicants submit that Claim 24 is patentable over Fidric in view of Falquier for at least the same reasons Claim 17 is patentable over the combination. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claims 24 and pass this claim to allowance.

CONCLUSION

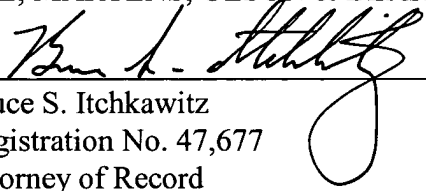
In view of the foregoing remarks, Applicants submit that Claims 1-3, 5-18, and 21-40 are in condition for allowance and Applicants respectfully request such action. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 12/30/05

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